Action and instruments for E.U. steppe habitat conservation

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Abstract

Conservation problems and EU actions affecting Mediterranean steppes are analysed. Cropland afforestation (R.2080/92/EEC), olive and almond plantations and large-scale infrastructure, all partially subsidized by EU funds, are drastic changes that affect large areas. Crop intensification via new irrigation schemes and farm mergers, partially funded by FEOGA-Orientation, can also have serious repercussions. Conservation activities via ACE-Biotopes and LIFE have been useful for publicizing and dynamising the process, but compared with the areas actually protected, they have had little effect. The paper concludes that steppes must be conserved in a multiple approach, trying to combine agricultural, infrastructure and conservation policies to the greatest possible degree.

Introduction

In their broad definition, pseudosteppes embrace both landscapes with low natural vegetation and an absence of a developed shrub and tree strata and also extensive cereal croplands (Suárez et al. 1992). They cover large areas in the Mediterranean zone of the EU. Using the declared IBAs (Grimmet & Jones 1989) as a reference, Spain (2,057,000 ha) has the largest areas, but France and Portugal (59,000 ha declared IBAs in both) and Italy (33,000 ha) also have considerable zones.

Farm intensification since the 1960s has caused several types of profound changes to the pseudosteppes in different regions and zones. The most disadvantaged zones have witnessed a process of crop abandonment and regeneration into scrub (e.g., in Pugglia, Italy and the páramo uplands of Castilla-León, Spain- see Majoral 1987, Gutiérrez et al. 1993). In other areas such as in the Ebro valley and some irrigated parts of Extremadura, Spain (De Juana et al. 1993), there has been profound intensification. The registered trends are, however, hard to extrapolate into the future due to the large degree of uncertainty for dryland cereal farming.

This paper analyses the conservation problems for the EU pseudosteppes and the Union action and instruments that affect them.

Major changes of uses

There are three basic changes in use that have profound effects on pseudosteppes: afforestation of cropland, increased tree crops on dryland, and new infrastructure.

The forestation of cropland is a valid alternative for many cereal farmers in disadvantaged zones (Regulation 2078/92/EEC). In Spain there are 1,275,000 ha of land (Sumpsi 1995) with low cereal output (less than 1500 kg/ha) and extremely low financial yield (see Naveso & Fernández 1993). In the 1993-1997 period, the Forestation Plan envisages action in 715,000 ha. It is therefore logical to expect that these disadvantaged, agriculturally unintensified areas which generally have high natural values, will be the ones that receive this aid (Castellano & Cifuentes 1994). To date, farmers have expressed less interest than expected, although this is probably transitory due to the high sunflower subsidies at the start of the 1990s and the cereal output of recent harvests.

The area of dryland tree crops, particularly olive and almond, have varied greatly due to the changes in the CAP orientation in the sector. At the start of the 1980's, the EEC provided incentives for uprooting large areas of marginal olive groves in the south and centre of the Iberian Peninsula (Pastor & Humanes 1991). This trend has been reversed in recent years, with plantations of olives and almonds on many pseudosteppes in the S and SE of the Peninsula, primarily in Andalucia. One clear example of this process is the trend in the Andalusian municipalities of Jodár and Cabra del Santo Cristo (Jaén). A comparison of the 1977 and 1994 Agriculture, Fishing and Food Ministry farm census in Jódar reveals a 21% increase in area of dryland olive groves and a 37% in olives under irrigation, while herbaceous crops have declined by 53% and 62% respectively. In the second municipality, dryland olives have remained stable, while the irrigated area has risen by 303%, and herbaceous or fallow crops have fallen by 5% and 13% under each system respectively.

Today, olives are a relatively competitive crop. There is no surplus, they are not subject to the current CAP reform, and there are large subsidies for oil production which are reflected in acceptable olive prices. Furthermore, it is an alternative crop to cereals in some regions, especially zones where drip irrigation is viable, where production has increased by 50-100% (Pastor & Humanes 1991).

The conversion of Iberian steppes into olive groves has serious consequences for steppe fauna and vegetation (see Muñoz-Cobo 1992). The new olive groves are intensified crops that use large amounts of fertilizer as well as herbicides to combat weeds. This causes the disappearance of the characteristic pseudosteppe vegetation and the replacement of the local open land fauna communities by forest types.

The third problem is the creation of new infrastructure. Most of the new works carried out by the Spanish Government, primarily highways and large dams, have been financed by structural funds. These works affect considerable areas: in 1992-93 alone, the central Government built 1,500 km of highways, which, assuming a minimum band width of 230 m, means that around 15,000 ha/year are affected,

part of which is in steppes.

The Community Directive 337/85/EEC obliges an Environmental Impact Study for these new works. As several authors have pointed out, however (Milara 1995, Oñate et al. 1995), the quality of these studies is poor, as most focus on corrective measures. The lack of EU monitoring of the Environmental Impact Studies impedes their effectiveness in terms of limiting impact, and serious disturbances in very important natural areas continue to occur, many in pseudosteppes.

Crop and grazing intensification

Crop intensification on Iberian dryland farms is reflected in increased irrigation, farm mergers and a reduction of long-term fallow land. The first two are partly subsidized by FEOGA-Orientation, although their problem is different.

Irrigated land has increased steadily Spain over recent decades to 3,208,000 ha in 1992. This rise has differed by regions, as some cases such as the Ebro valley or Castilla-León are large-scale schemes promoted by the central or regional Governments, while others are private initiatives, involving a heavy development of greenhouse crops in SE Andalusia (see Manrique & De Juana, 1991 for the case of Almería). Although the most recent predictions are for a further 600.000 ha under irrigation, the drought over the last three years and conflicts over local and inter-regional use of water reserves are causing a considerable reduction in figures, and no indicative figures can be advanced at present. Nevertheless, increased productivity from the introduction of irrigation (cereal production practically doubles and sugar beet triples) means that this tendency is possibly transitory, and in the near future we may well see further increases in irrigated areas.

Farm mergers are being encouraged by the central Government and partially funded by FEOGA-Orientation. Although this has already happened in most steppes, a further 300,000 ha are expected to be merged in the coming years in Objective 1 Regions (European Commission, 1994a).

Another form of intensification is the shrinkage of fallow land, especially fallow for more than one year. Theoretically, the compulsory set-aside of 15% of cropland should cause an increase in the fallow area, but in fact a lot of shrub and pasture land has been ploughed up to maintain the area really under crops. These unproductive plots used to sustain natural vegetation of their own, and played a very important role for birds, especially during the reproduction period as a nesting substratum or for feeding chicks (Tellería et al. 1988, Martínez 1992). The declining trend in fallow areas can be withstood to some degree, although the Spanish government's application of agroenvironmental measures (R 2078/92/EEC) includes a specific programme to maintain traditional fallow land (MAPA 1994).

Fertilizers are being used less in recent years because of their rising prices, and the dosage is much lower than in the more intensified farming areas of central Europe (Díaz et al. 1994). This is not the case in the more productive steppelands, where fertilizers and biocides are used heavily. In the context of farm intensification, the agroenvironmental measures linked to R 2078/92/EEC may become important, and have been extremely useful in La Crau (France). Crop farmers in the more cerealist parts of Spain have expressed little enthusiasm for the zonal programmes. This lack of acceptance may, however, be short-term, and could well change significantly in the coming years.

Sheep grazing is essential for the maintenance of steppe characteristics (Suárez et al. 1992). The sheep population appears to have remained steady in recent years, although there is a trend towards semi-stabling and overgrazing in some zones. This tendency will probably continue in the coming years. The heavy dependency of farm income on FEOGA-Guarantee subsidies per head (in some zones up to 50% of gross income, Peco & Suárez 1993) makes this sector extremely sensitive to future CAP policies.

Finally, a brief comment on structural funds for regional development (LEADER Projects). Virtually all of the Iberian steppes lie in Objective 1 regions. Many constituencies have thus set up LEADER projects, most of them focussed on local industry or correcting problems of water pollution and solid waste management. These funds can be extremely useful for stabilizing the local farming population and promoting quality farm products, a sector which may become essential to steppe conservation in the near future.

Steppe conservation in EU nature conservation programmes

The European Union, via its ACE-Biotopes Programmes and LIFE financial instruments, has cofunded eight projects aimed at protecting EU steppeland in the Mediterranean region. The majority have been in Spain (4) and France (3), and only one is in Portugal.

The main features of these projects are set out in Table 1. Their cost varies considerably from 570,000 to 3,900,000 ECUs), with an average of around 1,535,000 ECUs. They are thus relatively costly projects with a 50-75% subsidy, most of which is used to buy or lease land.

These sums are distributed very unevenly among EU countries. The French projects have received 55% of the total investment in steppe areas, considerably more than Spain (35%) or Portugal (10%). In comparison with funding for other types of ecosystems in the 1984-1991 period, steppe projects have only received 7% while wetlands have received 53% and forests 28% (European Commission 1994b).

The majority of the projects include relatively large land areas, although they also vary. The central objective of all but one of them is to protect certain bird species or their habitats. The main beneficiaries are NGOs, although occasionally regional and local Governments participate actively. The importance of these projects can be assessed from two perspectives: (i) the area affected in comparison with the total area and the areas protected legally, or (ii) the promotion of the importance of these areas.

Legally protected steppes are estimated to cover 50,000 ha in Spain, and none in France, Portugal or Italy (Suárez et al. 1994). Considering that these projects theoretically affect approximately 252,000 ha in Spain, 11,500 ha in France and 2,600 ha in Portugal, we can consider the effect to be extremely positive. If these figures are compared with the steppes declared as IBAs, however, the area affected by the projects is much poorer- around 12% in Spain, 19% in France and 4% in Portugal. Moreover, the Spanish figures may be misleading given that the Los Llanos project in Cáceres is unlikely to reach the specified area.

The promotional aspect is difficult to evaluate. Large-scale campaigns by the majority of the NGOs participating in these projects and the construction of visitor centres has led to a considerable increase in the number of visitors. This work can thus be considered as positive.

Finally, it is essential to consider that pseudosteppe conservation cannot just involve one type of action (Suárez 1994). Although the conservation projects are undoubtedly important, the amount earmarked for agricultural funds and the areas of threatened pseudosteppes are several orders of magnitude higher than those for conservation. It is therefore vital to broach the problem from a multiple perspective by combining agricultural, infrastructure and conservation policies to the greatest possible degree.

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Resumé

Les auteurs analysent les problèmes de conservation et les actions comunautaires qui concernent les steppes méditerranéennes. La reforestation des terres agricoles (R. 2080/92/CEE), les plantations d'oliviers et d'amandiers et les grandes infrastructures, subventionnées partiellement par des fonds comunautaires, représentent les changements drastiques qui peuvent concerner de grandes perficies. En outre, l'intensification des cultures via de nouvelles irrigations et une concentration parcellaire, financées en partie par la FEOGA-orientation, peuvent également avoir d'importantes répercussions. Les actions de conservation entreprises grâce à des fonds ACE-Biotopes et LIFE ont permis des actions d'information et de dynamisation, bien que leurs répercussions en terme de superficies protégés se sont avérées réduites. Les auteurs concluent que la conservation des milieux steppiques doit être conduite à partir d'une approche multiple, en essayant de faire coïncider autant que possible les politiques agraires, d'infrastructure et de conservation.

ANNEXES

Project	Years	Total budget (ECUsx10^3)	Area (ha)	Beneficiary	Main Effect	Main action
Steppe bird habitat protection: Tierra de Belchite	90-94	570	600	NGO	Birds	Land purchas
Habitat conservation: Los Llanos de Cáceres	91-94	1,974	245,700	NGO/R.G.	Birds	Land purchas & lease
Wetland and arid area conservation: Múrcia	93-95	1,806	2,598	R.G.	Flora, wet-lands	Land purchas & restoration
Houbara bustard habitat conservation: Lanjares region	94-95	340	2,700	R.G.	Birds	Land purchas
Natural Reserve creation: The Crau	88-92	554	150	NGO	Birds	Management agreements
The Crau séche protection and management, 1st phase	89-93	1,800	7,000	NGO/L.G	Birds	Land purchas
The Crau séche protection and management, 2nd phase	94-96	3,900	11,500	NGO/L.G.	Birds	Land purchas & lease
Steppe bird conservation: Castro Verde plains	93-94	1,333	2,600	NGO	Birds	Land purchas & lease

Table 1 : Projects funded by the E.U. under the ACE-Biotopes and LIFE Programmes which affect Mediterranean steppe zones. NGO : Non-Government Organization L.G. : Local Government R.G. : Regional Government